Teaching Lower Gastrointestinal Endoscopy: A Comparison Of Family Medicine And Internal Medicine Residencies

William J. Crump, M.D., and Thomas K. Phelps, M.D.

Abstract: **Lower gastrointestinal endoscopy (LGIE) is an important procedure in primary care for detecting colorectal cancer. This survey of family practice (FP) and internal medicine (IM) residency directors in the southeastern United States shows that 100 percent of FP and 92 percent of IM programs provide training in LGIE. Less than half of all programs had certification criteria, and both disciplines showed a clear preference for the 60-cm flexible sigmoidoscope. LGIE procedures in IM programs were more frequently supervised by gastroenterologists, and in FP programs they were more frequently supervised by FP faculty. Only 55 percent of FP and 56 percent of IM residents were predicted to suggest screening LGIE to their patients, and 80 percent of FP and 63 percent of IM residents were predicted to include sigmoidoscopy in the evaluation of hematochezia. (J Am Board Fam Pract 1991; 4:1-4.)**

Colorectal cancer is an important source of morbidity and mortality in the United States. While there is considerable controversy about the appropriate role of lower gastrointestinal endoscopy (LGIE) as a screening modality,[1-4] it has been widely accepted as an appropriate procedure to be performed by primary care physicians.[5,6] There are well-detailed reports of individual residency training programs in LGIE[7-10] and its use in practice.[11,12] In addition, the most effective way to train the practitioner has been studied.[13,14] We describe residency training in LGIE in primary care programs in the southeastern United States from the residency director's perspective as a first step to understanding the current role of this procedure.

Methods

A questionnaire was mailed to the program director of each family practice (FP) and internal medicine (IM) residency program, including 115 university (67 FP), 51 community (32 FP), and 15 military (9 FP) programs, in 13 southeastern states. The questionnaire asked directors whether their residents received training in LGIE, the specialty of the training supervisor, and numbers of required or suggested procedures for certification. In addition, the directors were requested to make an overall estimate about the percentage of residents in the last graduating class considered satisfactorily trained in LGIE. They also were asked to predict the manner in which residents would respond in two hypothetical clinical vignettes. The first was an asymptomatic 55-year-old man who requested a general physical examination and had never had a sigmoidoscopy. The second was a 55-year-old woman with several episodes of bright red blood in the stool who had a normal anoscopic examination. For each question, a separate response was possible for each of the 35-cm, 60-cm, or 150-cm LGIE, as well as other diagnostic options.

Our questionnaire response rate was 84 percent for 73 IM programs and 92 percent for 108 FP programs.

Results

The residency directors' responses about training are summarized in Table 1. One hundred percent of FP programs and 92 percent of IM programs provided some training in LGIE. Ninety-three percent of FP programs and 72 percent of the IM programs provided training with the 60-cm endoscope, the most frequently used length utilized in both disciplines. The preference for the 60-cm endoscope was more marked in the FP programs.

From the University of Alabama in Huntsville. Send reprint requests to William J. Crump, M.D., 201 Governor's Drive, Huntsville, AL 35801.

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Table 1. Description of Training by Residency Directors.*

	Length of Endoscope					
	FP			IM		
	35 cm	60 cm	150 cm	35 cm	60 cm	150 cm
Percentage programs providing training	27	93	11	44	72	12
If program provides training, % graduating residents in each program satisfactorily trained	77	69	4	62	52	21
If program has certification process, number of procedures required	13	14	25	14	15	19

*Family practice n = 99; internal medicine, n = 61.

A low proportion of both disciplines' programs offered training in 150-cm LGIE. Table 1 also shows the mean percentage of graduating residents considered satisfactorily trained. Program directors from both disciplines indicated that more residents were satisfactorily trained in the 35-cm LGIE when it was offered, but a majority also was competent in the 60-cm procedure. A much larger percentage was satisfactorily trained in the 150-cm procedure in IM programs than in FP programs.

Thirty-nine percent of FP programs and 48 percent of IM programs had established certification criteria. Some programs used only demonstrated competence as a criterion, while 34 percent of FP programs and 39 percent of IM programs had numerical criteria. Table 1 shows the mean number of procedures required by these programs for each procedure. Two FP programs and one IM program used completion of a specific LGIE course as a criterion. Faculty supervision of the procedures showed a remarkable difference between the disciplines. In FP programs, an average of 72 percent were supervised by FP faculty, 21 percent by gastroenterologists, and 5 percent by surgeons. In the IM programs, 23 percent were supervised by primary IM faculty, 69 percent by gastroenterologists, and 1 percent by surgeons. In all FP programs, training was provided by more than one specialty. Gastroenterologists exclusively provided the training in 33 percent of IM programs.

Table 2 shows the mean percentage of residents who the directors predicted would employ LGIE in each clinical vignette. The directors predicted that their residents would prefer 60-cm LGIE in both cases, except that IM directors predicted that more of their residents would suggest full colonoscopy for hematochezia when it was not life threatening. Overall, only 55 percent of FP and 56 percent of IM residents were predicted to suggest screening LGIE. For evaluation of hematochezia, 80 percent of FP and 63 percent of IM residents would choose one of the sigmoidoscopes. Some directors responded that their residents would suggest more than one option to the patient, resulting in cumulative percentages greater than 100. Also shown in Table 2 is the percentage predicted to offer fecal occult blood testing (FOBT) to the asymptomatic patient.

Program directors in both disciplines reported high interest in this study. Approximately 80 percent said that they would like to receive a copy of our results.

Discussion

This survey shows that in these residencies, LGIE is an important procedure. The clear preference for the longer of the available flexible sigmoidoscopes is in keeping with national sales information. Rodney reported that of the 8000 LGIE scopes sold to primary care physicians in 1986 and 1987, only 5 percent were 35-cm instruments.[1]

Table 2. Prediction of Clinical Situation Choices by Residency Directors (Percent Residents Predicted to Choose).

	Length of Endoscope				FOBT*
	35 cm	60 cm	Either	150 cm	
Screening question					
FP	11	48	56	—	90
IM	19	39	56	—	94
Hematochezia questions					
FP	17	69	80	22	—
IM	18	48	63	52	—

*Fecal occult blood test.

More FP programs included this training than did IM programs, and a higher percentage of FP residents were perceived as satisfactorily trained. It is noteworthy that in both specialties' training programs, a large percentage of residents were not satisfactorily trained despite the provision of the training. This suggests that LGIE is not yet fully integrated into training; it is currently provided as an elective experience in most programs.

This training gap is highlighted by the lack of specific numerical guidelines for certification in more than half of the programs. Various specialty organizations have suggested numerical guidelines in consensus statements. The Health and Public Policy Committee of the American College of Physicians suggests that 7 supervised 35-cm sigmoidoscopies and 15 with the 60-cm instrument are the minimum numbers necessary for certification.[5] The directors of the programs who had numerical criteria tended to agree with the higher number for both instruments. Recent reports found that most trainees in well-structured training programs for primary care residents actually became proficient around the 20th to 30th examination with the 60-cm sigmoidoscope.[15,16]

It is of note that in both of the recent reports, the training supervisors were board-certified gastroenterologists. Our data showed a remarkable difference in supervision within training programs, with the majority in FP supervised by FP faculty and the majority in IM supervised by gastroenterologists. It is likely that the criteria used to certify a completed procedure differ between the disciplines, possibly explaining the slightly lower proportion of satisfactorily trained residents in the IM programs. A particularly fertile area of future research in LGIE training is the practice style differences shown by residents supervised by primary care faculty versus gastroenterologists.

It is also noteworthy that the directors predicted that almost half of their residents would not follow the American Cancer Society guidelines for screening LGIE. This might be because the directors perceived that their residents are not interested in screening for colorectal carcinoma, but this is an unlikely explanation considering the predicted high rate of FOBT use. Other possible explanations for this low utilization might include the residents' concerns about the cost of the procedure, the risk of complications, or their own comfort in performing a relatively invasive procedure on an asymptomatic patient. Further study is planned to address these possibilities by asking the residents themselves how they make the decision to suggest screening LGIE.

In the setting of hematochezia without anal pathology, the directors also predicted a low LGIE utilization rate. Most clinicians in this situation choose colonoscopy alone or air contrast barium enema complemented by sigmoidoscopy. The IM directors predicted a higher rate of 150-cm LGIE in this situation, perhaps because ready gastroenterology consultation is more available in these programs. Table 1 shows that this difference probably is not because more IM programs provide 150-cm training. As with the screening question, further study is planned to explore this decision-making process in more detail by asking the residents themselves.

LGIE is an important, relatively new extension of the physician's examining hands and eyes. The results of this survey show that most primary care training programs in the Southeast provide this training but have not yet established criteria for certification. The results also show subtle differences in training between the two primary care disciplines and a relatively low predicted utilization for LGIE in both disciplines.

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